

US EPA RECORDS CENTER REGION 5



461029

October 18, 2007

Mr. Jeffrey Kimble
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency Region 5
9311 Groh Road
Grosse Ile, Michigan 48138

**Subject: Sampling Plan
 Carter Coat Site
 Detroit, Wayne County, Michigan
 Technical Direction Document No. S05-0709-001
 STN Environmental, JV Contract No. EP-S5-06-03**

Dear Mr. Kimball:

TN & Associates, Inc. (TN&A), a member of the STN Environmental Joint Venture with Sullivan International Group, Inc. (SIG), is submitting the enclosed Sampling Plan for the Carter Coat site in Detroit, Wayne County, Michigan. This Sampling Plan, along with the appropriate Certificate of Insurance will be sent to the City of Detroit in order to obtain right of entry on the property for the Site Assessment. If you have any questions or comments about the report or need additional copies, please contact me at (216) 214-8824 or Raghu Nagam at (312) 220-7005.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stephen Wolfe".

Stephen Wolfe
Project Manager, TN & Associates, Inc.

Enclosure

cc: Gail Nabasny, START Project Officer
 Raghu Nagam, START Program Manager

**SAMPLING PLAN
CARTER COAT SITE
DETROIT, WAYNE COUNTY, MICHIGAN**

Prepared for:

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Emergency Response Branch Region 5
77 West Jackson Boulevard
Chicago, IL 60604**

TDD No.:	S05-0709-001
Date Prepared:	October 17, 2007
Contract No.:	EP-S5-0603
Prepared by:	T N & Associates, Inc.
START Project Manager:	Stephen Wolfe
Telephone No.:	(216) 214-8824
U.S. EPA On-Scene Coordinator:	Jeffrey Kimble
Telephone No.:	(734) 692-7688

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1.0 INTRODUCTION

T N & Associates, Inc. (TN&A), a member of the STN Environmental Joint Venture with Sullivan International Group, Inc. (Sullivan), has prepared this Sampling Plan in accordance with the requirements of U.S. Environmental Protection Agency (U.S. EPA) Technical Direction Document (TDD) No. S05-0709-001 under the Superfund Technical Assessment and Response Team (START) contract No. EP-S5-06-03. The scope of this TDD is to conduct a site assessment at the Carter Coat site in Detroit, Wayne County, Michigan. START was tasked to prepare a review the Michigan Department of Environmental Quality's site files, prepare a site-specific Health and Safety Plan, prepare a field sampling and analysis plan, subcontract an analytical laboratory, collect samples, evaluate analytical data, document on-site conditions with written logbook notes and still photographs, and prepare a Assessment Report. Stephen Wolfe of TN&A is the START Project Manager and will be performing the field work for the site assessment.

This Sampling Plan summarizes the site background; discusses the assessment activities; discusses sampling protocol; and provides a summary of the analytical methods that will be used. The attachments for this report includes excerpts from the STN JV Region 5 Quality Assurance Project Plan.

2.0 BACKGROUND

This section provides site background information as well as the history of the site. Information is obtained from the Michigan Department of Environmental Quality's "Technical Memorandum No. 1" for the site.

2.1 SITE DESCRIPTION

The Carter Coat site is located at 6051 Hastings Street in Detroit, Michigan. A large six-story concrete and steel frame building covers approximately one half of the property. The other half of the property was primarily used for parking. The property is fenced, but not secure as evidenced by vandalism activities

2.2 SITE HISTORY

The building was originally constructed and operated by General Motors Corporation (GMC), Fisher Body Division between 1919 and 1984. Facility operations involved automotive stamping of special discs and tools, dye sets, jigs and fixtures. GMC generated halogenated and non-halogenated spent solvents, spent plating wastes, ignitable and corrosive wastes from its operations at this location.

Between 1985 and 1990, the facility was owned and operated by Cameo Color Coat, Inc. The Property ownership transferred Carter Color Coat and the facility operated as a conditionally exempt small quantity generator of hazardous wastes.

Carter Coat declared bankruptcy and abandoned the facility in 1993. GMC conducted a removal action at the property in the early 1990s, removing paints and other hazardous materials from the building.

MDEQ and their contractor conducted a site assessment of the property in April and June of 2004, and proceeded to obtain bids for the clean-up. Due to funding issues, the State of Michigan is no longer able to fund the clean-up at the property and therefore requested assistance from the U.S. EPA in August of 2007.

This Sampling Plan will be used to supplement the data obtained during the MDEQ site assessment as well as clarify the scope of removal work to be performed.

3.0 PROPOSED SITE ASSESSMENT ACTIVITIES

Proposed site assessment activities for the investigation at the Carter Coat site are described below.

3.1 SITE RECONNAISSANCE

On November 19, 2007, On-Scene Coordinator (OSC) Jeffrey Kimble, START Stephen Wolfe, TN&A, and MDEQ representatives will perform a site walk and collect samples for analysis. The site walk will be used to determine how much material is on the floor that may have to be removed as asbestos containing material (ACM), how many light ballasts are in the facility that may contain PCB oil, and help determine a course of removal action. It is anticipated that all activities can be completed in the course of one day.

3.2 PROPOSED SAMPLING ACTIVITIES

START will collect a limited number of samples to verify the results of the site assessment performed by MDEQ and to further clarify any of the work items that the State has requested U.S. EPA to perform.

Specifically, the following samples will be collected:

There are two underground storage tanks (USTs) suspected to have contained gasoline on site. If possible, these tanks will be sampled using a sludge judge and field checked for pH and then analyzed for flammability.

Two composite samples of surface soil will be collected surrounding the USTs to determine if soil removal is warranted in these areas. MDEQ found arsenic in amounts greater than the residential standard for the State of Michigan in these areas. These samples will be analyzed for total metals only.

MDEQ had a contractor consolidate wastes and overpack as much material as possible into drums. The contractor had performed disposal analysis on these wastes and identified several possible waste streams. START will open the containers that had low/high pH results and field verify these results with pH paper.

One waste stream was identified to have high TCLP results for lead and chromium. START will resample this waste stream and submit for TCLP metal analysis.

MDEQ had requested that U.S. EPA remove PCB contaminated wood block flooring from the facility. There is no data to suggest that the wood block flooring is contaminated with PCBs. START will collect up to 10 samples of the wood block flooring for PCB and PAH analysis. Samples of the wood block flooring will be collected either by using a cordless hand drill to drill holes in the floor and collecting the sawdust or as an alternative, a hammer and wood chisel will be used to collect pieces of the floor.

MDEQ had requested scarification of approximately 1,800 square feet of PCB contaminated concrete. START will be collecting several wipe samples to verify that there is PCB contamination on the concrete and to see if it is removable. Wipe samples will be collected by using a gauze pad wetted with hexane solvent and wiping a 10 cm by 10 cm area of concrete

TABLE 1
SAMPLING REQUIREMENTS WORKSHEET
CARTER COAT SITE ASSESSMENT

Matrix	Parameter/Method	Volume and Container	No. of Samples	No. of Quality Control (QC) Samples						Total No. of samples (Investigative + QC)	Total No. of sample containers
				MS	MSD	Field Duplicate or Split	Equipment Blank	Field Blank	Trip Blank		
Wood Chips/sawdust	PCBs – SW-846 Method 8082	One 8-oz glass jar	10	1	1	1	0	0	0	13	13
Wood Chips/sawdust	SVOCs (PAHs) – SW-846 method 8270C-SIM	One 8-oz glass jar	10	1	1	1	0	0	0	13	13
Wipe Sample	PCBs -- SW-846 Method 8082	Laboratory supplied wipe kit	5	0	0	0	0	0	0	5	5
Soil	Total Metals – SW-846 Method 6010B	One 8-oz glass jar	2	0	0	0	0	0	0	2	2
Liquid	Ignitability SW846 Method 1010 and/or 1020A	One 4-oz glass jar	2	0	0	0	0	0	0	2	2
Waste	TCLP Metals SW-846 Method 1311 and 6010B	One 1,000-ml glass bottle	1	0	0	0	0	0	0	1	1
Rinsate	PCBs – SW-846 Method 8082	One 8-oz glass jar	0	0	0	0	1	0	0	1	1
Rinsate	SVOCs (PAHs) – SW-846 Method 8270C	One 8-oz glass jar	0	0	0	0	1	0	0	1	1

ATTACHMENT A

REFERENCES

(EXCERPTS FROM STN JV REGION 5 QUALITY ASSURANCE PROJECT PLAN)

2.5.1 Field Quality Control Requirements

Field QC samples will be collected and analyzed to assess the quality of data generated from sampling activities. These samples may include trip blanks, field blanks, equipment rinsate blanks, field duplicates, field split samples, MS samples, MSD samples, and matrix duplicate samples. Field QC measurements may include field replicate measurements and checks of instrument responses against QC standards.

Trip blanks are used to assess the potential for sample contamination during handling, shipment, and storage. Trip blanks are sample bottles filled by the analytical laboratory with organic-free water. The trip blanks are sealed and transported to the field; kept with empty sample bottles and then with the investigative samples throughout the field effort; and returned to the laboratory for analysis with the investigative samples. Trip blanks are never opened in the field. One trip blank is usually included within every shipping cooler of liquid samples to be analyzed for VOCs.

Field blanks are samples of the same or similar matrix as the actual investigative samples that are exposed to the sampling environment or equipment at the time of sampling. They are used to assess contamination resulting from ambient conditions. Field blanks are required for liquid matrices. For aqueous samples, field blanks consist of analyte-free water such as degasified organic-free water for VOC analysis, HPLC water for SVOC analysis, and de-ionized or de-mineralized water for inorganic analyses. Field blanks are generally not required for solid matrices but may be collected on a case-by-case basis. Typically, one field blank is collected for every 10 or fewer liquid investigative samples.

Equipment rinsate blanks are collected when sampling equipment is used. These blanks assess the cleanliness of sampling equipment and the effectiveness of equipment decontamination. Equipment rinsate blanks are collected by pouring analyte-free water over surfaces of cleaned sampling equipment that contact sample media. Equipment rinsate blanks are collected after sampling equipment has been decontaminated but prior to being reused for sampling. Equipment rinsate blanks are typically collected for each type of decontaminated sampling equipment.

Field duplicate samples are independent samples collected as close as possible in space and time to the original investigative sample. Immediately following collection of the original sample, the field duplicate sample is collected using the same collection method. Care should be taken to collect the field duplicate sample as close to the location of the original sample as possible. Field duplicate samples can measure how sampling and field procedures influence the precision of an environmental measurement. They can also provide information on the heterogeneity of a sampling location. Typically, field duplicates are collected at a frequency of one for every 10 investigative samples of the same matrix type.

Field split samples are usually a set of two or more samples taken from a larger homogenized sample. The larger sample is usually collected from a single sampling location, but can also be a composite sample. Field split samples can be sent to two or more laboratories and are used to provide comparison data between the laboratories.

Regulatory agencies involved in a project may request that field split samples be collected to monitor how closely laboratories are meeting project-specific QA objectives.

MS/MSD samples are typically collected for analysis by organic methods, and also often for analysis by inorganic methods. Solid MS/MSDs usually require no extra volume. Each liquid MS/MSD sample is a single sample, usually collected from a single sampling location at triple the normal sample volume. MS and matrix duplicate samples are typically collected for inorganic analysis. The MS sample and matrix duplicate sample are each a single sample, usually collected from a single location at double the normal sample volume. In the laboratory, MS/MSD samples and MS samples are spiked with known amounts of analytes. Matrix duplicate samples are not spiked. Analytical results of MS/MSDs are used to measure the precision and accuracy of the laboratory organic (or inorganic) analytical program and MSs are used to measure the accuracy of the inorganic analytical program. Matrix duplicate samples are used to measure the precision of the inorganic analytical program. Each of these QC samples is typically collected and analyzed at a frequency of one for every 20 investigative samples per matrix.

QC checks for field measurements will consist primarily of initial and continuing calibration checks of field equipment. When applicable, QC check standards independent of the calibration standards will be used to check equipment performance. For example, when checking the accuracy of field equipment such as pH meters, a standard buffer solution independent of the calibration standards may be used. Precision of field measurements will usually be checked by taking replicate measurements. To the extent possible, STN will use EPA-approved field methods. If approved methods are not available, STN SOPs will be referenced in the project-specific QAPP. The types and frequencies of field QC measurements and the QC limits for these measurements will be specified in the project-specific QAPP.

TABLE 2-1

STN ENVIRONMENTAL SOPs

Standard Operating Practice Topic	SOP No
FIELD PREPARATION	001
Site Access and Clearance	001A
FIELD RECORDS & DOCUMENTATION	002
Field Records and Documentation	002A
Photo-documentation	002B
GEOPHYSICAL INVESTIGATION METHODS	003
Setting Up a Geophysical Survey Grid	003A
Electrical Resistivity Techniques	003B
EM31 Terrain Conductivity Meter	003C
EM61 High Sensitivity Metal Detector	003D
Magnetic Geophysical Survey	003E
Seismic Refraction Survey	003F
Ground Penetrating Radar	003G
SURVEYING TECHNIQUES	004
Land Surveying Techniques (including GPS)	004A
FIELD SCREENING & FIELD ANALYTICAL METHODS	005
Standard Field Parameter Measurements	005A
Soil Field Screening Techniques	005B
Lead Paint Testing Using XRF	005C
Heavy Metals Testing Using XRF	005D
SURFICIAL MATERIAL SAMPLING TECHNIQUES	006
Sediment Sampling	006A
Surface Soil Sampling	006B
Surface Water Sampling	006C
Concrete Sampling	006D
Wipe Sampling for Lead Paint	006E
Air Sampling – SVE/VEP Pilot Tests	009D
Air Sampling using XRF	009E
Air-borne Asbestos Fibers Sampling	009F
MicroVac Dust Sampling for Asbestos	009G
ENVIRONMENTAL SAMPLE MANAGEMENT	010
Sample containers, Preservatives, and Holding Times (<i>Project-specific Only</i>)	010A
Soil Sample Preservation	010B
Sample Labeling, Control and Shipping	010C
EQUIPEMENT MANAGEMENT & DECONTAMINATION	011
Decontamination Procedures	011A
IDW MANAGEMENT	012

TABLE 2-2

**REQUIRED SAMPLE VOLUMES, CONTAINERS, PRESERVATION TECHNIQUES, AND
HOLDING TIME**

Matrix	Parameter	Analytical Method^a	Volume and Container	Preservation Techniques	Holding Time^b (Extraction/Analysis)
Water	Volatile organic compounds (VOC)	SW-846: 8015B, 8021B, 8260B CLP: OLC03.2, OLM04.3, SOM01.1	Three 40-mL glass vials with Teflon [®] -lined septum	To pH # 2 with hydrochloric acid; sodium thiosulfate if residual chlorine; store at 4°C	NA ^c /14 days
Water	Semi-volatile organic compounds (SVOC)	SW-846: 8270C CLP: OLC03.2, OLM04.3, SOM01.1	Two 1,000-mL amber glass bottles with Teflon [®] -lined caps	Sodium thiosulfate if residual chlorine present; store at 4°C	7 days/40 days
Water	Pesticides and herbicides	SW-846: 8081A, 8151A CLP: OLC03.2, OLM04.3, SOM01.1	Two 1,000-mL amber glass bottles with Teflon [®] -lined caps	Sodium thiosulfate if residual chlorine present; store at 4°C	7 days/40 days
Water	Polychlorinated biphenyls (PCB)	SW-846: 8082 CLP: OLC03.2, OLM04.3, SOM01.1, CBC01.0	Two 1,000-mL amber glass bottles with Teflon [®] -lined caps	Sodium thiosulfate if residual chlorine present; store at 4°C	7 days/40 days
Water	Dioxins and furans	SW-846: 8280A, 8290 CLP: DLM02.0	Two 1,000-mL amber glass bottles with Teflon [®] -lined caps	Store at 4°C	30 days/45 days
Water	Metals (except mercury)	SW-846: 6010B, 6020 CLP: ILM05.3	One 1,000-mL glass or polyethylene bottle	To pH < 2 with nitric acid (HNO ₃); store at 4°C	NA/180 days
Water	Mercury	SW-846: 6010B, 7470A CLP: ILM05.3	One 1,000-mL glass or polyethylene bottle	To pH # 2 with HNO ₃ , store at 4°C	NA/28 days
Water	Toxicity characteristic leaching procedure (TCLP) VOCs	SW-846: 1311/8260B	One 4-ounce glass bottle	Store at 4°C	14days/14days

TABLE 2-2 (Continued)

**REQUIRED SAMPLE VOLUMES, CONTAINERS, PRESERVATION TECHNIQUES, AND
HOLDING TIME**

Matrix	Parameter	Analytical Method^a	Volume and Container	Preservation Techniques	Holding Time^b (Extraction/Analysis)
Water	TCLP SVOCs	SW-846: 1311/8270C	One 1,000-mL glass bottle	Store at 4°C	14 days/7 days/40 days ^d
Water	TCLP Metals	SW-846: 1311/6010B	One 1,000-mL glass bottle	Store at 4°C	180 days/180 days 28 days/ 28 days (mercury)
Water	Ignitability	SW-846: 1010, 1020A	One 4-ounce glass jar	Store at 4°C	NA
Water	Corrosivity	SW-846: 9040B	One 4-ounce glass jar	Store at 4°C	NA
Water	Total and amenable cyanide	SW-846: 9010B, 9012A	One 1,000-mL glass or polyethylene bottle	To pH >12 with NaOH; store at 4°C	14 days
Soil/Sediment	VOCs	SW-846: 5035, 8260B CLP: OLM04.3, SOM01.1	(1) Three 40-mL screw-top septum-sealed glass vials, pre-weighted with magnetic stir bars (2) Three 40-mL screw-top septum-sealed glass vials, pre-weighted with magnetic stir bars (two vials to contain 5 mL of water) (3) Three Encore TM samplers containing 5 grams of soil	Freeze from -7 to -15°C or store at 4°C	NA/14 days (if frozen) NA/48 hours (if 4°C)
Soil/Sediment	SVOCs	SW-846: 8270C CLP: OLM04.3, SOM01.1	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	14 days/40 days
Soil/Sediment	Pesticides, herbicides	SW-846: 8081A, 8151A CLP: OLM04.3, SOM01.1	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	14 days/40 days
Soil/Sediment	PCBs	SW-846: 8082 CLP: OLM04.3, SOM01.1, CBC01.0	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	14 days/40 days

TABLE 2-2 (Continued)

**REQUIRED SAMPLE VOLUMES, CONTAINERS, PRESERVATION TECHNIQUES, AND
HOLDING TIME**

Matrix	Parameter	Analytical Method ^a	Volume and Container	Preservation Techniques	Holding Time ^b (Extraction/Analysis)
Soil/Sediment	Dioxins and furans	SW-846: 8280A, 8290 CLP: DLM02.0	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	30 days/45 days
Soil/Sediment	Metals (except mercury)	SW-846: 6010B, 6020 CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA/180 days
Soil/Sediment	Mercury	SW-846: 6010B, 7471A CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA/28 days
Soil/Sediment	TCLP VOCs	SW-846: 1311/8260B	Three 40-mL screw-top septum-sealed glass vials	Store at 4°C	14 days/14 days
Soil/Sediment	TCLP SVOCs	SW-846: 1311/8260B	One 8-ounce glass jar	Store at 4°C	14 days/7 days/14 days ^c
Soil/Sediment	TCLP Metals	SW-846: 1311/8260B	One 8-ounce glass jar	Store at 4°C	180 days/180 days 28 days/28 days (mercury)
Soil/Sediment	Ignitability	SW-846: 1010 or 1020A	One 4-ounce glass jar	Store at 4°C	NA
Soil/Sediment	Corrosivity	SW-846: 9045C	One 4-ounce glass jar	Store at 4°C	NA
Soil/Sediment	Total and amenable cyanide	SW-846: 9010B or 9012A CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA
Waste	VOCs	SW-846: 8260B CLP: OLM04.3, SOM01.	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	NA/14 days
Waste	SVOCs	SW-846: 8270C CLP: OLM04.3, SOM01	One 8-ounce glass jar with Teflon [®] -lined cap	Store at 4°C	14 days/40 days

TABLE 2-2 (Continued)

**REQUIRED SAMPLE VOLUMES, CONTAINERS, PRESERVATION TECHNIQUES, AND
HOLDING TIME**

Matrix	Parameter	Analytical Method^a	Volume and Container	Preservation Techniques	Holding Time^b (Extraction/Analysis)
Waste	Pesticides, herbicides	SW-846: 8081A, 8151A CLP: OLM04.3	One 8-ounce glass jar with Teflon [®] - lined cap	Store at 4°C	14 days/40 days
Waste	PCBs	SW-846: 8082 CLP: OLM04.3, CBC01.0	One 8-ounce glass jar with Teflon [®] - lined cap	Store at 4°C	14 days/40 days
Waste	Dioxins and furans	SW-846: 8280A, 8290 CLP: ILM05.3	One 8-ounce glass jar with Teflon [®] - lined cap	Store at 4°C	30 days/45 days
Waste	Metals (except mercury)	SW-846: 6010B, 6020 CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA/180 days
Waste	Mercury	SW-846: 6010B, 7471A CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA/28 days
Waste	TCLP VOCs	SW-846: 1311/8260B	One 4-ounce glass jar	Store at 4°C	14 days/14 days
Waste	TCLP SVOCs	SW-846: 1311/8260B	One 8-ounce glass jar	Store at 4°C	14 days/7 days/14 days ^c
Waste	TCLP Metals	SW-846: 1311/6010B	One 8-ounce glass jar	Store at 4°C	180 days/180 days 28 days/28 days (mercury)
Waste	Ignitability	SW-846: 1010 or 1020A	One 4-ounce glass jar	Store at 4°C	NA
Waste	Corrosivity	SW-846: 9040B	One 4-ounce glass jar	Store at 4°C	NA
Waste	Total and amenable cyanide	SW-846: 9010B or 9012A CLP: ILM05.3	One 8-ounce glass jar	Store at 4°C	NA

Notes

mL = Milliliter

^a Analytical methods listed are from either SW-846 (Test Methods for Evaluating Solid Waste) or CLP (Contract Laboratory Program) statements of work.

^b Holding time is measured from the time of sample collection to the time of sample extraction and analysis.

^c NA = Not applicable

^d SVOCs holding time for Method 1311 include time to extraction/leachate/analysis of sample.